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SPECIFICATION

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Patent Titled: METHOD AND ARTICLE FOR SORTING  
OF PROTECTIVE COVERINGS

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FIELD OF THE INVENTION

This invention relates to protective coverings used in manufacturing and industrial environments, and particularly to protective coverings for feet and more particularly to an apparatus and method for easily distinguishing and sorting protective coverings by size.

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## BACKGROUND OF THE INVENTION

Protective covering for feet are commonly used in many manufacturing and industrial environments. This can apply to boots, or overboots, to cover and protect  
5 either the wearers' feet or the foot portion of a complete body-covering suit that may be used in clean room or hazardous material environments. Protective coverings can also apply to bonnets, or other apparel worn to protect either the wearers' clothes or body.

In some cleanroom applications, workers wear a full body oversuit followed by a pair of boots or overboots. The overboots are used to protect the structure of the foot  
10 portion of the oversuit as well as provide protection and support to the workers' feet. Another example application is for hazardous material handling. Similar to the cleanroom application, the worker wears an oversuit with overboots. This application, however, requires the overboot to be waterproof and chemical resistant. In this instance the overboot is a type of soft, pliable rubber or neoprene ® type material.

15 In order for these overboots to be relatively comfortable for the worker as well as safe to walk in, they preferably must be of varying sizes. Although exact sizes would be extremely costly, there are typically a variety of sizes available for the workers to chose from. These sizes may include but are not limited to extra small, small, medium, large, and extra large. As sizing is far from exact, the overboots may be ambidextrous, with  
20 lefts and rights being the same shape.

Applications that require the use of an overboot generally will have a common area for workers to change out of their street shoes and into their oversuit followed by their overboots. Typically the overboot will be in either a package labeled with the size or a storage bin designated for a particular size. The overboots are of a lightweight,  
25 durable material, but are still somewhat flexible or floppy so they do not maintain a form or shape while off the wearer permitting an actual size distinction based on size or shape. Therefore, differing sizes are not readily distinguishable. Unfortunately, the overboots all look a like and after several wrong size selections being returned to the wrong bin, the overboots tend to get mixed up. To located a pair of overboots of a desired size, a worker

may end up digging through multiple bins checking sizes that may be printed on a discrete label or stamped somewhere on the overboot. This searching wastes valuable time as well as creates a certain amount of frustration for the worker. Some workers may give up and wear a size either too small, causing the overboot to wear quickly, or  
5 wear a size that is too big creating a trip hazard or other safety issue.

In most applications requiring the use of overboots when the worker leaves the area requiring the overboots, they are removed and deposited into a laundry bin, which is common to all sizes. Typically the overboots are laundered by a commercial laundry and returned to the changing room in pairs, and placed in the appropriate bins or storage area  
10 designated for each size. It is common practice for the commercial laundry to have the responsibility of returning the laundered overboots according to the specified sizes and quantities ordered by each facility. Errors such as mismatched pairs or incorrectly marked packages can cause the users or wearers frustration as well as potentially cost the commercial launderer their contract with that particular facility. Unfortunately, for the  
15 launderer to maintain a reasonable profit margin on the laundering of these overboots, sorting after laundering must be done quickly and efficiently. Finding a discrete tag or marking on each overboot is time consuming. Additionally, when all overboots look essentially the same, it is easy to get the sized pairs mixed up.

What is needed is a means of readily distinguishing sizes in protective coverings  
20 such as overboots so that they can be selected for their size by wearers as well as a method for quickly and accurately sorting by size after laundering.

## SUMMARY OF THE INVENTION

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The invention is an apparatus and method for sorting and distinguishing by size protective coverings such as overboots where the protective coverings are visually size distinguishable by color or pattern of coverings. The method consists of placing a plurality of protective coverings of varying colors, each color correlating to a size, into a

sorting area; selecting all of a first color or pattern; and placing all the first color or pattern in a first storage location. This process is repeated for each color or pattern in the lot of protective coverings until all colors are sorted into their size specific storage location.

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## BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a representation of the flowchart of the preferred embodiment of the present invention for efficiently sorting protective coverings by color where color is indicative of size.

The above description and other objects, advantages, and features of the present invention will be more fully understood and appreciated by reference to the specification and accompanying drawings, wherein:

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## DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT

FIG. 1 is a representation of the flowchart of the preferred embodiment of the present invention for efficiently sorting protective coverings by color where color is indicative of size. In this preferred embodiment, the protective coverings are boots or overboots. In block 100, a plurality of overboots in an assortment of colors and sizes are received to be sorted based on size where each size is a different color. In an alternate embodiment, a distinct pattern on the overboots is used for sorting in place of a distinct color. Such pattern may be across the entire protective covering, or may be in the form of a distinctive color stripe.

In block 102, the variable N is set where N equals the number of sizes within the lot of overboots. Since each size is of a distinct color or pattern, N also denotes the number of colors or patterns in the lot. In block 104, overboots of a first, or Nth, color

are removed from the lot. In block 106, overboots of color N, therefore size N, are placed or stored in this N designated storage location. Block 108 queries the presence of any more N colored overboots. If other N colored overboots are present, control returns to block 104 for further removal of N colored overboots. If there are no other N colored overboots present in the lot, control moves to block 110 where N is decremented by one. Control moves to block 112 where the value of N is queried to determine if N is equal to zero. In the event N is equal to zero, all overboots have been sorted and the sorting is complete. If N does not equal zero, control loops back to block 104 with a value new N value.

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Wherein the terms and expressions which have been employed in the foregoing specification are used therein as terms of description and not of limitation, there is no intention, in the use of such terms and expressions, of excluding equivalents of the features shown and described or portions thereof, it being recognized that the scope of the invention is defined and limited only by the claims which follow.

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